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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/560,122	04/28/2000	Too Yew Teng	1961-00100	3390

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EXAMINER

VUONG, BACH Q

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 09/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/560,122

Applicant(s)

TENG ET AL.

Examiner

Bach Q Vuong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06/27/03.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,4,8-11,13 and 15-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11,15,16 and 18-23 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,8-10,13 and 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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This is communication is responsive to an amendment filed on 6/27/03

***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 8-10, 13 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatayama (JP 09033447 A).

Hatayama, according to Figs. 1-6, shows an apparatus for detecting cracks in optical discs comprising all features of the claimed invention.

Regarding claim 1, see Fig. 1 which show an apparatus for detecting cracks in optical discs comprising: a disc drive for spinning the optical disc at a plurality of speeds (see Spindle motor 5, Spindle 1 in Fig. 1); at least one transmitter (see laser 2a in Fig. 1) for propagating a light signal through the interior of the optical disc; at least one receiver (see photodetector 2b in Fig. 1) for receiving for receiving the propagated light emerging from the disc; and a microcontroller (see Judgment part 7) coupled to the receiver for analyzing received light signals..

Regarding claim 3, see Fig. 5 which shows an apparatus for detecting cracks in optical discs wherein the receiver is adapted to receive unreflected propagated signals emerging from the disc.

Regarding claim 4, see Fig. 6 which shows an apparatus for detecting cracks in optical discs wherein the receiver is adapted to received propagated signals (see signal L1) reflected by at least one crack in the disc.

Regarding claim 8, see Figs. 1, 4-6 which show an optical disk drive comprising a traverse mechanism (see Spindle 1a, 5 and 6) for spinning the disc and retrieving information

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from the disc, a loader mechanism (loader is inherently included in the crack detector device) for loading the disc onto the traverse mechanism, and a crack detection mechanism (see Figs. 1, 4-6) which is comprising a transmitter (light source 2a), mounted on the disc drive, for propagating a light signal through the interior of the spinning optical disc; a receiver mounted on the disk and having a light sensor (see 2b) positioned to receive light signals emerging from the disc; and a microcontroller (see crack judgment part 7) coupled to the receiver for analyzing received light signals.

Regarding claim 9, see Figs. 1 and 4-6 which show an optical disk drive comprising a traverse mechanism (see Spindle 1a, 5 and 6) for spinning the disc and retrieving information from the disc, a receiver (see photodetector 2b) is adapted to receive reflected propagated light generated by a crack positioned along the path of the propagated light.

Regarding claim 10, see Figs. 1 and 4-6 which show a method for detecting cracks in optical disc comprising: rotating (see spindle 1a) the optical disc; propagating an optical signal through the rotating optical disc (see light source 2a); receiving the propagated signal (see photodetector 2b); and analyzing the pattern of the received signal to determine if a crack is present in the optical disc (see crack judgment part 7).

Regarding claims 13, see Fig. 1 and 4 which shows a method for detecting cracks in optical disc wherein the optical signal is further propagated along a path that is approximately tangential to the inner edge of the disc.

Regarding claim 17, see the rejection applied to claim 3.

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***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance:

Claim 11, 15 and 16 are allowed over the prior art of record because all the references in the record, considered as closest references and viewed in combination or individually, fails to suggest or fairly teach a method for detecting cracks in optical discs including combination of all limitations as recited in claim 11. Claims 15 and 16 are allowed with their respective parent claim.

Claims 18-23 are allowed over the prior art of record because all the references in the record, considered as closest references and viewed in combination or individually, fails to suggest or fairly teach a method for detecting cracks in optical discs including combination of all limitations as recited in each of claims 18 and 21. Claims 19, 20, 22 and 23 are allowed with their respective parent claim.

***Response to Arguments***

In response to Applicant's arguments filed 06/27/2003 related to the rejection under 35 USC -102(b) as being anticipated by Hatayama (JP 09033447 A), Applicant's attention is drawn to the disclosure of Fig. 1 of Hatayama which disclose that the spindle motor 5 carries out the rotation drive of the spindle 1 based on a driving signal from the motorized section 6. Thus, the disc drive spins the optical disc at a plurality of speeds.

Also, Applicant's attention is drawn to Fig. 4 of Hatayama, which shows that the transmitter is mounted on the disc drive.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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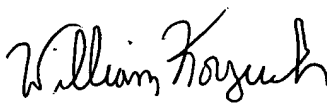
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bach Q Vuong whose telephone number is (703) 305-7355. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

BV  
September 3, 2003

  
WILLIAM KORZUCH  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600